

Table S-1. Twenty genomic regions unique to the classic *Brucella* genomes

Region	PATRIC locus tag	RefSeq locus tag	Protein Name	Size (aa)
1	<i>Brucella abortus</i> 2308 chromosome 1 (NC_007618) 256325..277581			
	VBIBruMei86222_0263		hypothetical protein	
	VBIBruMei86222_0264	BAB1_0250	Integrase	
	VBIBruMei86222_0265	BAB1_0252	hypothetical protein	
	VBIBruMei86222_0266	BAB1_0253	hypothetical protein	
	VBIBruMei86222_0267	BAB1_0254	hypothetical protein	
	VBIBruMei86222_0268	BAB1_0255	virulence-associated protein E	
	VBIBruMei86222_0269		Hypotheical protein	
	VBIBruMei86222_0270		Hypotheical protein	
	VBIBruMei86222_0271		hypothetical protein	
	VBIBruMei86222_0272		hypothetical protein	
	VBIBruMei86222_0273	BAB1_0258	hypothetical protein	
	VBIBruMei86222_0274	BAB1_0259	hypothetical protein	
	VBIBruMei86222_0275	BAB1_0260	Flagellar protein FlgJ [peptidoglycan hydrolase]	
	VBIBruMei86222_0276		Hypothetical Membrane Spanning Protein	
	VBIBruMei86222_0277		Hypothetical Membrane Spanning Protein	
	VBIBruMei86222_0278		hypothetical protein	
	VBIBruMei86222_0279	BAB1_0263	hypothetical protein	
	VBIBruMei86222_0280	BAB1_0265	hypothetical protein	
	VBIBruMei86222_0281	BAB1_0266	hypothetical protein	
	VBIBruMei86222_0282		hypothetical protein	
	VBIBruMei86222_0283	BAB1_0268	hypothetical protein	
	VBIBruMei86222_0284	BAB1_0270	Zinc-dependent metallopeptidase	
	VBIBruMei86222_0285	BAB1_0273	hypothetical protein	
	VBIBruMei86222_0286	BAB1_0274	hypothetical protein	
	VBIBruMei86222_0287	BAB1_0275	hypothetical protein	
	VBIBruMei86222_0288	BAB1_0276	hypothetical protein	
	VBIBruMei86222_0289		hypothetical protein	
	VBIBruMei86222_0290	BAB1_0277	hypothetical protein	
	VBIBruMei86222_0291	BAB1_0279	hypothetical protein	
	VBIBruMei86222_r003		tRNA-Phe-GAA	
				21256
2	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 513096..517366			
	VBIBruSui107850_r006		tRNA-Gln-TTG	
	VBIBruSui107850_0529	BR0513	TRANSPOSEASE	
	VBIBruSui107850_0530	BR0514	TRANSPOSEASE	
	VBIBruSui107850_0531		Transposase	
	VBIBruSui107850_0532		hypothetical protein	
	VBIBruSui107850_0533		TRANSPOSEASE	
	VBIBruSui107850_0534		hypothetical protein	
	VBIBruSui107850_0535	BR0517	formyltransferase, putative	
				4270
3	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 527133..527839			
	VBIBruSui107850_0549		hypothetical protein	
	VBIBruSui107850_0550		TRANSPOSEASE	
	VBIBruSui107850_0551		hypothetical protein	
				706
4	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 706238..722020			
	VBIBruSui107850_r009		tRNA-Arg-TCT	
	VBIBruSui107850_0734	BR0722	hypothetical protein	
	VBIBruSui107850_0735	BR0723	exonuclease, putative	

VBIBruSui107850_0736	BR0724	Adenylate kinase, archaeal type	
VBIBruSui107850_0737	BR0725	acetyltransferase, GNAT family	
VBIBruSui107850_0738	BR0726	TRANSCRIPTIONAL REGULATOR	
VBIBruSui107850_0739	BR0727	hypothetical protein	
VBIBruSui107850_0740		hypothetical protein	
VBIBruSui107850_0741		hypothetical protein	
VBIBruSui107850_0742	BR0729	TRANSPOSE	
VBIBruSui107850_0743	BR0730	transposition protein, putative	
VBIBruSui107850_0744	BR0731	hypothetical protein	
VBIBruSui107850_0745		hypothetical protein	
VBIBruSui107850_0746	BR0732	hypothetical protein	
VBIBruSui107850_0747	BR0733	hypothetical protein	
VBIBruSui107850_0748	BR0734	exclusion of bacteriophage Ap1	
VBIBruSui107850_0749	BR0735	hypothetical protein	

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5	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 776058..777806		
	VBIBruSui107850_0806	BR0796	hypothetical protein
	VBIBruSui107850_0807	BR0797	hypothetical protein
	VBIBruSui107850_0808	BR0798	hypothetical protein
	VBIBruSui107850_0809	BR0799	hypothetical protein
	VBIBruSui107850_r011		tRNA-Val-TAC

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6	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 938812-946054		
	VBIBruSui107850_0978		hypothetical protein
	VBIBruSui107850_0979	BR0967	hypothetical protein
	VBIBruSui107850_0980	BR0968	hypothetical protein
	VBIBruSui107850_0981	BR0969	hypothetical protein
	VBIBruSui107850_0982		hypothetical protein
	VBIBruSui107850_0983	BR0970	hypothetical protein
	VBIBruSui107850_0984	BR0971	25 KDa OUTER-MEMBRANE IMMUNOGENIC PROTEIN PRECURSOR
	VBIBruSui107850_0985		hypothetical protein
	VBIBruSui107850_0986	BR0972	hypothetical protein
	VBIBruSui107850_0987	BR0974	hypothetical protein
	VBIBruSui107850_0988	BR0975	hypothetical protein
	VBIBruSui107850_0989		tRNA-guanine transglycosylase
	VBIBruSui107850_0990		ISBm1, transposase orfA
	VBIBruSui107850_0991		IS711, transposase orfB
	VBIBruSui107850_0992		IS711, transposase orfB
	VBIBruSui107850_0993	BR0979	hypothetical protein

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7	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 951301..952185		
	VBIBruSui107850_0998	BR0984	SECRETION ACTIVATOR PROTEIN
	VBIBruSui107850_0999		hypothetical protein
	VBIBruSui107850_1000	BR0986	hypothetical protein

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8	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 1049738..1054365		
	VBIBruSui107850_r019		tRNA-Leu-GAG
	VBIBruSui107850_1094	BR1079	hypothetical protein
	VBIBruSui107850_1095		hypothetical protein
	VBIBruSui107850_1096		hypothetical protein
	VBIBruSui107850_1097	BR1080	hypothetical protein
	VBIBruSui107850_1098		hypothetical protein
	VBIBruSui107850_1099	BR1081	hypothetical protein

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	VBIBruSui107850_1100		RECOMBINASE	
	VBIBruSui107850_1101	BR1082	site-specific recombinase, resolvase family	
	VBIBruSui107850_1102		hypothetical protein	
9	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 1426639..1429237			
	VBIBruSui107850_1496		hypothetical protein	2800
	VBIBruSui107850_1497	BR1470	hypothetical protein	
	VBIBruSui107850_1498	BR1471	hypothetical protein	
	VBIBruSui107850_1499	BR1472	hypothetical protein	
	VBIBruSui107850_1500	BR1473	hypothetical protein	
	VBIBruSui107850_1501	BR1474	site-specific recombinase, phage integrase family	
10	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 1781604-1786564			
	VBIBruSui107850_r039		tRNA-Ser-CGA	5140
	VBIBruSui107850_1884		hypothetical protein	
	VBIBruSui107850_1885	BR1851	TRANSPOSEASE	
	VBIBruSui107850_1886	BR1852	Transcriptional regulator, Cro/CI family	
	VBIBruSui107850_1887	BR1853	hypothetical protein	
	VBIBruSui107850_1888	BR1854	hypothetical protein	
	VBIBruSui107850_1889	BR1855	TRANSPOSEASE	
11	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 1844477..1846546			
	VBIBruSui107850_1944	BR1910	membrane protein, putative	2069
	VBIBruSui107850_1945	BR1911	hypothetical protein	
	VBIBruSui107850_1946	BR1912	Antibiotic biosynthesis monooxygenase	
	VBIBruSui107850_1947	BR1913	(AF179595) Vco33	
	VBIBruSui107850_1948		Transcriptional regulator, ArsR family	
12	<i>Brucella suis</i> 1330 chromosome I (NC_004310.3) 1881867..1891020			
	VBIBruSui107850_r047		tRNA-Leu-CAA	9203
	VBIBruSui107850_1984	BR1950	hypothetical protein	
	VBIBruSui107850_1985	BR1951	Transcriptional regulator, LysR family	
	VBIBruSui107850_1986	BR1952	hypothetical protein	
	VBIBruSui107850_1987	BR1953	amino acid ABC transporter, periplasmic amino acid-binding protein	
	VBIBruSui107850_1988		ASPARAGINE TRANSPORT SYSTEM PERMEASE PROTEIN	
	VBIBruSui107850_1989		Amino acid ABC transporter, permease protein	
	VBIBruSui107850_1990	BR1955	Glutamine transport system permease protein glnP (TC 3.A.1.3.2)	
	VBIBruSui107850_1991	BR1956	ASPARAGINE TRANSPORT ATP-BINDING PROTEIN	
	VBIBruSui107850_1992	BR1957	arginase family protein	
	VBIBruSui107850_1993	BR1958	Aspartate ammonia-lyase	
	VBIBruSui107850_1994	BR1959	ASPARAGINE TRANSPORT ATP-BINDING PROTEIN	
	VBIBruSui107850_1995	BR1960	L-asparaginase	
13	<i>Brucella suis</i> 1330 chromosome II (NC_004311.2) 43204..44397			
	VBIBruSui107850_2269	BRA0047	hypothetical protein	1193
	VBIBruSui107850_2270	BRA0048	hypothetical protein	
	VBIBruSui107850_2271	BRA0050	hypothetical protein	
14	<i>Brucella suis</i> 1330 chromosome II (NC_004311.2) 245420..250301			
	VBIBruSui107850_2478	BRA0263	sugar-binding transcriptional regulator, LacI family	5923
	VBIBruSui107850_2479	BRA0264	hypothetical protein	
	VBIBruSui107850_2480	BRA0265	L-arabinose-binding periplasmic protein precursor araF (TC 3.A.1.2.2)	
	VBIBruSui107850_2481	BRA0266	ATP-binding protein of sugar ABC transporter	

VBIBruSui107850_2482	BRA0267	putative ABC transporter permease protein
VBIBruSui107850_2483		hypothetical protein
VBIBruSui107850_2484	BRA0268	Ribitol 2-dehydrogenase

15	<i>Brucella suis</i> 1330 chromosome II (NC_004311.2) 343695..361343		
VBIBruSui107850_2576	BRA0362	Integrase	17696
	BRA0364	COG5534: Plasmid replication initiator protein	
	BRA0365	hypothetical protein	
	BRA0366	Conjugative transfer protein TrbL	
	BRA0367	hypothetical protein	
	BRA0368	Conjugative transfer protein TrbJ	
	BRA0369	hypothetical protein	
	BRA0370	hypothetical protein	
		hypothetical protein	
	BRA0372	traJ protein	
	BRA0373	Protein traI	
	BRA0374	hypothetical protein	
	BRA0375	hypothetical protein	
	BRA0376	hypothetical protein	
	BRA0377	hypothetical protein	
	BRA0378	hypothetical protein	
	BRA0379	DNA-damage-inducible protein J	

16	<i>Brucella suis</i> 1330 chromosome II (NC_004311.2) 371453..382271		
VBIBruSui107850_2602	BRA0390	hypothetical protein	10704
	BRA0391	QUINONE OXIDOREDUCTASE	
	BRA0392	(TC 3.A.1.4.1)	
	BRA0393	PERMEASE PROTEIN LIVH / HIGH-AFFINITY BRANCHED-CHAIN AMINO ACID TRANSPORT ATP-BINDING PROTEIN LIVG	
		branched-chain amino acid ABC transporter, permease/ATP-binding protein	
		PERMEASE PROTEIN LIVH / HIGH-AFFINITY BRANCHED-CHAIN AMINO ACID TRANSPORT ATP-BINDING PROTEIN LIVG	
	BRA0395	Branched-chain amino acid transport ATP-binding protein livF (TC 3.A.1.4.1)	
	BRA0396	SHORT CHAIN DEHYDROGENASE	
	BRA0397	Shikimate 5-dehydrogenase I alpha # AroDI alpha	
	BRA0398	Glucose-methanol-choline oxidoreductase	
	BRA0399	aldehyde dehydrogenase family protein	

17	<i>Brucella suis</i> 1330 chromosome II (NC_004311.2) 523396..539420		
VBIBruSui107850_2758	BRA0543	UDP-glucose 4-epimerase	16645
	BRA0544	Cellulose synthase catalytic subunit [UDP- forming]	
	BRA0545	UDP-glucose dehydrogenase	
	BRA0546	hypothetical protein	
	BRA0547	Endoglucanase H	
	BRA0548	hypothetical protein	
	BRA0549	conserved domain protein	
	BRA0550	transcriptional regulator, AraC family	
		IS711, transposase orfB	
		IS711, transposase orfB	
		IS5 family element, transposase orfA	
	BRA0553	cell wall surface protein, putative	
		TRANSPOSEASE	
	BRA0555	Preprotein translocase subunit-like protein	
	BRA0556	TRANSPOSEASE	

VBIBruSui107850_2773	BRA0557	Integration/Recombination
VBIBruSui107850_2774	BRA0558	IS66 family element, orf1, transposase, putative
VBIBruSui107850_2775		TRANSPOSEASE
VBIBruSui107850_2776	BRA0560	hypothetical protein
VBIBruSui107850_r052		tRNA-Ser-TGA

18	<i>Brucella suis</i> 1330 chromosome II (NC_004311.2) 791495..798941		
7384	VBIBruSui107850_3024		ABC TRANSPORTER INTEGRAL MEMBRANE PROTEIN
	VBIBruSui107850_3025		ABC transporter, permease protein
	VBIBruSui107850_3026	BRA0809	ABC transporter, ATP-binding protein
	VBIBruSui107850_3027	BRA0810	ABC transporter, periplasmic substrate-binding protein
	VBIBruSui107850_3028		D-mannonate oxidoreductase
	VBIBruSui107850_3029		D-mannonate oxidoreductase
	VBIBruSui107850_3030	BRA0812	Uronate isomerase
	VBIBruSui107850_3031	BRA0813	Transcriptional regulator, GntR family

19	<i>Brucella suis</i> 1330 chromosome II (NC_004311.2) 818887..822164		
3764	VBIBruSui107850_r056		tRNA-Thr-CGT
	VBIBruSui107850_3049	BRA0833	hypothetical protein
	VBIBruSui107850_3050	BRA0834	hypothetical protein
	VBIBruSui107850_3051	BRA0835	hypothetical protein
	VBIBruSui107850_3052	BRA0836	hypothetical protein
	VBIBruSui107850_3053	BRA0837	hypothetical protein
	VBIBruSui107850_3054	BRA0838	hypothetical protein

20	<i>Brucella suis</i> 1330 chromosome II (NC_004311.2) 1056740..1102269		
47259	VBIBruSui107850_r060		tRNA-Ser-GGA
	VBIBruSui107850_3296	BRA1072	IS3 family element, transposase orfB
	VBIBruSui107850_3297	BRA1073	IS3 family transposase orfA
	VBIBruSui107850_3298	BRA1074	Transcriptional regulator, GntR family
	VBIBruSui107850_3299	BRA1075	hypothetical protein
	VBIBruSui107850_3300	BRA1076	2-ketoglutaric semialdehyde dehydrogenase
	VBIBruSui107850_3301	BRA1077	CAIB/BAIF family protein
	VBIBruSui107850_3302	BRA1078	OLIGOPEPTIDE TRANSPORT ATP-BINDING PROTEIN OPPF
	VBIBruSui107850_3303	BRA1079	Oligopeptide transport ATP-binding protein oppD (TC 3.A.1.5.1)
	VBIBruSui107850_3304	BRA1080	Dipeptide transport system permease protein DPPC
	VBIBruSui107850_3305	BRA1081	OLIGOPEPTIDE TRANSPORT SYSTEM PERMEASE PROTEIN OPPB
	VBIBruSui107850_3306	BRA1082	TRANSCRIPTIONAL REGULATOR
	VBIBruSui107850_3307		acid dehydrogenase complex
	VBIBruSui107850_3308	BRA1084	PERIPLASMIC DIPEPTIDE TRANSPORT PROTEIN PRECURSOR
	VBIBruSui107850_3309		Branched-chain alpha-keto acid dehydrogenase, E1 component, alpha subunit / Branched-chain alpha-keto acid dehydrogenase, E1 component, beta subunit
	VBIBruSui107850_3310		Branched-chain alpha-keto acid dehydrogenase, E1 component, alpha subunit / Branched-chain alpha-keto acid dehydrogenase, E1 component, beta subunit
	VBIBruSui107850_3311	BRA1086	3-hydroxybutyryl-CoA dehydrogenase ; 3- hydroxyacyl-CoA dehydrogenase
	VBIBruSui107850_3312	BRA1087	Enoyl-CoA hydratase [branched-chain amino acid degradation]
	VBIBruSui107850_3313	BRA1088	Butyryl-CoA dehydrogenase
	VBIBruSui107850_3314	BRA1089	penicillin amidase family protein
	VBIBruSui107850_3315	BRA1090	PERIPLASMIC DIPEPTIDE TRANSPORT PROTEIN PRECURSOR
	VBIBruSui107850_3316	BRA1092	peptide ABC transporter, permease protein, putative
	VBIBruSui107850_3317	BRA1093	Dipeptide transport system permease protein DppC (TC 3.A.1.5.2)
	VBIBruSui107850_3318	BRA1094	Oligopeptide transport ATP-binding protein oppD (TC 3.A.1.5.1)

VBIBruSui107850_3319		Dipeptide transport ATP-binding protein DppF (TC 3.A.1.5.2)
VBIBruSui107850_3320	BRA1096	Transcriptional regulator, GntR family
VBIBruSui107850_3321	BRA1097	putative
VBIBruSui107850_3322	BRA1098	Oligopeptide transport system permease protein oppB (TC 3.A.1.5.1)
VBIBruSui107850_3323	BRA1099	Oligopeptide transport system permease protein oppC (TC 3.A.1.5.1)
VBIBruSui107850_3324		Oligopeptide transport ATP-binding protein oppD (TC 3.A.1.5.1)
VBIBruSui107850_3325		hypothetical protein
VBIBruSui107850_3326	BRA1101	Oligopeptide transport ATP-binding protein oppF (TC 3.A.1.5.1)
VBIBruSui107850_3327	BRA1102	gluconolactonase, putative
VBIBruSui107850_3328	BRA1103	amidase family protein
VBIBruSui107850_3329		(TC_3.A.1.11.1)
VBIBruSui107850_3330		(TC_3.A.1.11.1)
VBIBruSui107850_3331	BRA1105	(TC_3.A.1.11.1)
VBIBruSui107850_3332	BRA1106	polyamine ABC transporter, permease protein, putative
VBIBruSui107850_3333		Spermidine Putrescine transport ATP-binding protein potA (TC_3.A.1.11.1)
VBIBruSui107850_3334		SPERMIDINE/PUTRESCINE TRANSPORT ATP-BINDING PROTEIN POTA
VBIBruSui107850_3335	BRA1108	Glutamate-1-semialdehyde aminotransferase
VBIBruSui107850_3336	BRA1109	Blr3550 protein
VBIBruSui107850_3337	BRA1110	Ribulose-5-phosphate 4-epimerase and related epimerases and aldolases
VBIBruSui107850_3338	BRA1111	Candidate type III effector Hop protein
VBIBruSui107850_3339	BRA1112	hypothetical protein
VBIBruSui107850_3340	BRA1113	transcriptional modulator of MazE/toxin, MazF
VBIBruSui107850_3341		D-LACTATE DEHYDROGENASE